

CLAIM AMENDMENTS:

1. (currently amended) An emulsion producing apparatus which is an emulsion producing apparatus for producing an emulsion by mixing at least two kinds or more of liquids, said emulsion producing apparatus comprising:

mixing means for mixing the plurality of liquids substantially uniformly;

a pressure rising pump for rising pressure of a mixture solution produced by the mixing means; and

emulsifying means for bringing the mixture solution pressurized from the pressure rising pump into an emulsified state;

wherein the emulsifying means includes a plurality of chambers into which the mixture solution flows;

wherein the plurality of chambers are arranged in series and partitioned by partition walls arranged among the respective chambers; and

wherein each of the partition walls is formed with at least one or more of small holes for communicating contiguous ones of the chambers interposing the partition walls.

2. (original) The emulsion producing apparatus according to Claim 1:
wherein a diameter of an equivalent circle of the small hole of the
partition wall falls in a range of 0.5 mm through 2 mm.

3. (currently amended) An emulsion producing apparatus which
is an emulsion producing apparatus for producing an emulsion by mixing at
least two kinds or more of liquids, said emulsion producing apparatus
comprising:

 mixing means for mixing the plurality of liquids substantially uniformly;
 a pressure rising pump for rising pressure of a mixture solution
produced by the mixing means;

 wherein delivery pressure of the pressure rising pump provided an inlet
of the emulsifying means falls in a range of 5 MPa through 15 MPa; and

 emulsifying means for bringing the mixture solution pressurized from
the pressure rising pump into an emulsified state;

 wherein the emulsifying means includes a plurality of chambers into
which the mixture solution flows;

 wherein the plurality of chambers are partitioned by partition walls
arranged among the respective chambers; and

wherein each of the partition walls is formed with at least one or more of small holes for communicating contiguous ones of the chambers interposing the partition walls.

4. (currently amended) An emulsion producing apparatus which is an emulsion producing apparatus for producing an emulsion by mixing at least two kinds or more of liquids, said emulsion producing apparatus comprising:

 mixing means for mixing the plurality of liquids substantially uniformly;
 a pressure rising pump for rising pressure of a mixture solution produced by the mixing means;

 wherein delivery pressure of the pressure rising pump provided at an inlet of the emulsifying means falls in a range of 5 MPa through 15 MPa; and

 emulsifying means for bringing the mixture solution pressurized from the pressure rising pump into an emulsified state;

 wherein the emulsifying means includes a plurality of chambers into which the mixture solution flows;

 wherein the plurality of chambers are partitioned by partition walls arranged among the respective chambers;

wherein each of the partition walls is formed with at least one or more of small holes for communicating contiguous ones of the chambers interposing the partition walls; and

wherein a diameter of an equivalent circle of the small hole of the partition wall falls in a range of 0.5 mm through 2 mm.

5. (currently amended) The emulsion producing apparatus according to Claim 1, wherein the mixing means ~~mixes~~ includes means for mixing the plurality of liquids and a surfactant substantially uniformly.

6. (currently amended) An emulsion producing apparatus which is an emulsion producing apparatus for producing an emulsion by mixing at least two kinds or more of liquids, said emulsion producing apparatus comprising:

mixing means for mixing the plurality of liquids substantially uniformly;

wherein the mixing means mixes the plurality of liquids and a surfactant substantially uniformly; [[.]]

a pressure rising pump for rising pressure of a mixture solution produced by the mixing means;

wherein delivery pressure of the pressure rising pump provided at an inlet of the emulsifying means falls in a range of 5 MPa through 15 MPa; and

emulsifying means for bringing the mixture solution pressurized from the pressure rising pump into an emulsified state;

wherein the emulsifying means includes a plurality of chambers into which the mixture solution flows;

wherein the plurality of chambers are partitioned by partition walls arranged among the respective chambers;

wherein each of the partition walls is formed with at least one or more of small holes for communicating contiguous ones of the chambers interposing the partition walls; and

wherein a diameter of an equivalent circle of the small hole of the partition wall falls in a range of 0.5 mm through 2 mm.

7. (previously presented) The emulsion producing apparatus according to Claim 1, wherein the pressure rising pump is driven by an electric motor whose rotational speed can be changed.

8. (previously presented) The emulsion producing apparatus according to Claim 1, wherein the pressure rising pump is driven by an engine utilizing the mixture solution brought into the emulsified state by the emulsifying means as a fuel.

9. (previously presented) The emulsion producing apparatus according to Claim 1, wherein the pressure rising pump is of a variable delivery type.

10. (previously presented) The emulsion producing apparatus according to Claim 1, wherein a pre-pressurizing pump for pressurizing the mixture solution produced by the mixing means and sending it to the pressure rising pump is provided on an upstream side of the pressure rising pump.

11. (currently amended) An ~~The~~ emulsion producing apparatus ~~according to Claim 1, wherein~~ for producing an emulsion by mixing at least two kinds or more of liquids, said emulsion producing apparatus comprising:
mixing means for mixing the plurality of liquids substantially uniformly;
a pressure rising pump for rising pressure of a mixture solution produced by the mixing means; and
emulsifying means for bringing the mixture solution pressurized from the pressure rising pump into an emulsified state, the emulsifying means
~~includes~~ including a cylindrical main body;
wherein the emulsifying means includes a plurality of chambers into which the mixture solution flows;

wherein the plurality of chambers are partitioned by partition walls arranged among the respective chambers;

wherein each of the partition walls is formed with at least one or more of small holes for communicating contiguous ones of the chambers interposing the partition walls;

wherein inside of the main body is aligned with spacers for maintaining constant intervals between the partition walls and/or an interval between the partition wall and one end of the main body;

wherein the spacers are aligned alternately along with the partition walls along a longitudinal direction of the main body; and

wherein the partition walls and the spacers are urged in one direction along the longitudinal direction of the main body to press to the main body by a spring arranged in the main body.

12. (currently amended) The emulsion producing apparatus according to Claim 1, wherein the ~~plurality of liquids are two kinds of liquids of water and the fuel~~ mixing means includes a first inlet for introducing water, fuel, and surfactant into the mixing means, and a second inlet for introducing emulsifying liquid from the emulsifying means into the mixing means.

13. (previously presented) The emulsion producing apparatus according to Claim 2, wherein the pressure rising pump is driven by an electric motor whose rotational speed can be changed.

14. (previously presented) The emulsion producing apparatus according to Claim 3, wherein the pressure rising pump is driven by an electric motor whose rotational speed can be changed.

15. (previously presented) The emulsion producing apparatus according to Claim 2, wherein the pressure rising pump is driven by an engine utilizing the mixture solution brought into the emulsified state by the emulsifying means as a fuel.

16. (previously presented) The emulsion producing apparatus according to Claim 3, wherein the pressure rising pump is driven by an engine utilizing the mixture solution brought into the emulsified state by the emulsifying means as a fuel.

17. (previously presented) The emulsion producing apparatus according to Claim 2, wherein the pressure rising pump is of a variable delivery type.

18. (previously presented) The emulsion producing apparatus according to Claim 2, wherein a pre-pressurizing pump for pressurizing the mixture solution produced by the mixing means and sending it to the pressure rising pump is provided on an upstream side of the pressure rising pump.

19. (canceled)

20. (currently amended) The emulsion producing apparatus according to Claim 2, wherein the ~~plurality of liquids are two kinds of liquids of water and the fuel~~ mixing means includes a first inlet for introducing water, fuel, and surfactant into the mixing means, and a second inlet for introducing emulsifying liquid from the emulsifying means into the mixing means.